

Method for Manufacturing of an Optical Fiber with a
Decoupling Interface for Scattered Light, Use of an Optical
Fiber and Device for Monitoring of the Light Power guided
through an Optical Fiber

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Abstract

Method for manufacturing of an optical fiber with a
decoupling interface (200) for scattered light to monitor the
10 power of light guided through said optical fiber, wherein
said optical fiber comprises a core (201) having a first
refractive index (n_1) and a cladding (202) surrounding said
core (201), said cladding (202) having a second refractive
index (n_2) being smaller than said first refractive index
15 (n_1), and wherein a portion of said optical fiber is
substantially straightly aligned in the region of the
decoupling interface (200), in which method the optical fiber
is electro-thermally treated at an intermediate position
within said substantially straightly aligned portion such
20 that a partial mixture of core material and cladding material
and, thereby, formation of scattering centers occurs in an
interface region (203) between said core (201) and said
cladding (202), thereby forming said decoupling interface
(200) for scattered light from said so modified intermediate
25 position.

(significant Fig.2a)